

SOURCE WATER ASSESSMENT:

A source water assessment has been completed for the wells serving the City of Wheatland. The sources are considered most vulnerable to the following activities not associated with any detected contaminants:

Well 3: Above ground storage tanks, construction /demolition staging areas, equipment storage areas, water supply wells, chemical/petroleum pipelines, gas stations.

Well 4: Gas stations, sewer collection systems.

Well 5: Chemical/petroleum pipelines, sewer collection systems.

Well 6: Auto repair & machine shops, bus terminals, grazing, septic systems, existing and historic gas stations.

Well 7: Grazing, home manufacturing, sewer collection systems.

Well 8: Sewer collection systems.

A copy of the complete assessment may be viewed at:

State Water Resource Control Board,
Division of Drinking Water
415 Knollcrest Drive
Suite 110, Redding, CA 96002
Reese Crenshaw at 530-224-4867

or at

City of Wheatland
208 4th Street
Wheatland, CA 95692

Comparing Bottled Water Tap Water

Tap Water has Stricter Regulations: Bottled water is regulated by the FDA, and tap water by the EPA (Environmental Protection Agency). The EPA has tighter restrictions and inspection regimens, while the FDA has a less stringent disclosure of consumer information. The FDA is not requiring disclosure of bottled water sources, treatment processes, and any contaminant reports. If your tap water source is public, however, the EPA is required to send an annual water quality report to its residents disclosing this information.

Cost of Bottled Water: Bottled water isn't just more expensive than tap water – it's a **lot** more expensive. The average cost per gallon of bottled water – not counting imported or sparkling waters – was \$1.21 in 2013. That doesn't sound too bad until you look at the cost of tap water, which is \$2 per every thousand gallons, according to the U.S. Environmental Protection Agency (EPA). That means that, priced by the gallon, bottled water is more than 600 times more expensive than tap water. Spending \$1 on a bottle of water every now and then isn't that big a deal, but when you make a regular habit of it, it really adds up. If you buy just one \$1 bottle of water each day, your annual spending on bottled water comes to \$365. Getting the same amount of water from your tap would cost you less than \$0.10.

Taste: One of the most common reasons people give for drinking bottled water is that it tastes better than their local tap water. However, this result is actually the exception rather than the norm. In most blind taste tests, tap water easily holds its own against bottled waters, even the pricey ones. You can see the same result in numerous cities, both in the U.S. and abroad. Try tap water chilled in the fridge from a glass pitcher with a lid or try it with a drop or two of lemon juice added. Try and filter the tap water by using filtering water pitchers or add a filtering device to the faucet you most often use.

Bottle Water is Bad for the Planet: It is important to limit the use of bottled water. Fossil fuels are burned to make, fill, package and transport plastic bottles. They're even made out of petroleum product. These fossil fuels are non-renewable and burning them creates pollution. Millions of bottles still end up in landfills, even though they can be recycled.



2016 WATER QUALITY CONSUMER CONFIDENCE REPORT

Public Water System Number 5810004

Este informe contiene información muy importante sobre su agua beber. Tradúzcalo ó hable con alguien que lo entienda bien.

The City of Wheatland is pleased to present our 2016 annual water quality report to our customers. This edition covers all testing completed from Jan 1, 2016 through Dec 31, 2016. Last year, as in years past, your tap water met all United States Environmental Protection Agency (USEPA) and State Water Resources Control Board (SWRCB) -Division of Drinking Water health standards. City of Wheatland Water System vigilantly safeguards its water supplies and once again, we are proud to report that our system has never violated a maximum contaminant level. This brochure is a snapshot of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to State standards. We are committed to providing you with information because informed customers are our best allies. For additional information concerning your drinking water, contact Donald R. Scott, Water Superintendent, at 530-633- 2785 or email at don@wheatland.ca.gov. If you wish to publicly participate in decisions affecting your drinking water quality, you may attend regularly scheduled City Council meetings on the 2nd and 4th Tues of each month. These meetings start at 6:00 pm and are located at 111 C Street, Wheatland. If you wish more info, you may call City Hall at 530-633-2761.

Where Does My Water Come From?

Water supply for the City of Wheatland originates from six deep groundwater sources known as Wells #3, #4, #5, #6, #7 and # 8 ranging from a depth of 159 to 280 feet below ground level. The water system has one ground level storage tank which holds 660,000 gals and one elevated storage tank that holds 72,000 gals. The elevated storage tank is used primarily to keep a constant pressure of approximately 48-50 psi throughout the water system grid. The average water consumption in the summer months is approximately 1,000,000 gals per day with a peak demand of 1,140,000 gals per day. Sodium hypochlorite solution (also known as bleach) is added at each well source head to disinfect and kill any possible disease causing bacteria. The amount of bleach that is injected into the water is closely monitored by the operator and the SCADA (Supervisory Control and Data Acquisition) computer system. SCADA computer system controls and monitors the complete water system and the operator can observe or control the On/Off status, flow rate, pressure (psi), chlorine residual level, and well's on/off tank levels at each well site. In the event of a problem occurring after hours or weekends, the SCADA system has an alarm system that dials the 24 hr. standby operator on duty so he may log on his computer at home to fix the problem or quickly respond if needed. The Wheatland Water Department is inspected annually by the SWRCB -Division of Drinking Water. We are required to follow all regulations set forth by USEPA and SWRCB Drinking Water Division, including a strict sample monitoring schedule. A copy of the inspection report is available upon request. Please know, your water meets or exceeds all state and federal standards.

Wheatland 2016 Water Conservation Results

Thanks to the residents the City accomplished a 25% water conservation reduction in 2016 compared to 2013. The City is very appreciative of its residents and we would like to thank all who made the effort and sacrifice to conserve water. It is important to remember that water conservation is not just for drought or times of water shortage, but should be practice all the time. Water is not an endless resource and must be used efficiency and not be wasted. We all must do our part to learn and teach the importance of water and the wise use of it. This will ensure an adequate supply of water for us and future generations. Be sure to visit our web site at wheatland.ca.gov for water conservation tips

Chemical Detected	Source	Year Tested	Level Detected	SMCL	PHG	Major Source
SECONDARY STANDARDS (Aesthetic Effects Only-Do Not Pose a Health Hazard)						
Color	Well 3 Well 4 Well 5 Well 7 Well 8	2009	1 Unit 2 Unit	15 Units	None	Erosion/ Leaching of natural deposits
Turbidity	Well 3 Well 4 Well 5 Well 6 Well 7 Well 8	2009 2013 2009 2009 2009 2009	0.05 NTU 0.5 NTU 0.2 NTU 5.2 NTU 0.3 NTU 0.1 NTU	5 NTU	None	Erosion/ Leaching of natural deposits
Total Dissolved Solids	Well 3 Well 4 Well 5 Well 6 Well 7 Well 8	2013 2014 2008 2008 2008 2009	270 ppm 370 ppm 310 ppm 330 ppm 450 ppm 260 ppm	1000	None	Erosion/ Leaching of natural deposits
Iron	Well 4 Well 8 Well 6	2013 2010 2012	320 ppb 149 ppb 355 ppb	300	None	Erosion/ Leaching of natural deposits
Copper	Well 3 Well 5	2016 2015	0.0019 ppm 0.0061 ppm	1	None	
Zinc	Well 3 Well 5 Well 6	2016 2016 2015	0.0045 ppm 0.0076 ppm 0.029 ppm	5	None	
Chloride	Well 3 Well 4 Well 5 Well 6 Well 7 Well 8	2013 2014 2008 2011 2013 2009	26.5 ppm 34.1 ppm 40.8 ppm 18.0 ppm 215 ppm 57.7 ppm	600	None	
Sulfate	Well 3 Well 4 Well 5 Well 6 Well 7 Well 8	2014 2014 2008 2011 2013 2009	42.2 ppm 52.4 ppm 22.0 ppm 65 ppm 45 ppm 27.1 ppm	600	None	

Detected Contaminants in your water: These tables give a list of detected chemicals in our water as set by USEPA and the SWRCB Drinking Water Division testing schedule. Please note that not all sampling is required annually so in some cases results are more than one year old or longer. The following tables list only organic, inorganic, and secondary chemicals that were detected in your water. Your water is tested for nearly 100 other chemicals that if not listed, were found to be **not detected**. The minimum detection level is typically in parts per million, parts per billion, or parts per trillion. Test results are then compared to state and federal standards to confirm your water meets all drinking water health standards. Secondary Standards contaminants are not considered to present a risk to human health.

Chemical Detected	Source	Year Tested	Level Detected	MCL	PHG	Major Source
INORGANIC CONTAMINANTS						
Fluoride (Natural Source)	Well 3	2013	177 ppb	2000	1000	Erosion of natural deposits; water additive which promotes strong teeth
	Well 4	2004	151 ppb			
	Well 5	2014	204 ppb			
	Well 6	2014	113 ppb			
	Well 7	2013	151 ppb			
	Well 8	2009	355 ppb			
Selenium	Well 6	2009	8.2 ppb	50	None	Runoff and leaching from fertilizer use; leaching from septic tanks, sewage
Barium	Well 3	2013	54 ppb	1000	None	
Nitrite	Well 7	2009	0.25 ppb	1000	None	
Arsenic	Well 3	2014	1.7 ppb	10	0.004	
	Well 5	2014	2.2 ppb			
	Well 6	2014	1.7 ppb			
	Well 7	2013	2.9 ppb			
	Well 8	2016	3.1 ppb			
Nitrate (NO ₃)	Well 3	2016	12.6 ppm	45	45	
	Well 4		20.8 ppm			
	Well 5		10.0 ppm			
	Well 6		20.3 ppm			
	Well 7		10.6 ppm			
	Well 8		13.5 ppm			
SODIUM AND HARDNESS TEST RESULTS						
Sodium	Well 3	2011	39.3 ppm	None	None	Erosion of natural deposits
	Well 4	2015	16 ppm			
	Well 5	2006	24 ppm			
	Well 6	2006	15 ppm			
	Well 7	2010	71 ppm			
	Well 8	2006	63.1 ppm			
Total Hardness (as CaCO ₃)	Well 3	2015	160 ppm	None	None	
	Well 4		250 ppm			
	Well 5		160 ppm			
	Well 6		260 ppm			
	Well 7		220 ppm			
	Well 8		72 ppm			
UNREGULATED CONTAMINANTS						
Boron	Well 6	2003	340 ppb	UCMR	1000	Erosion/ Leaching of natural deposits
	Well 7	2003	100 ppb			
	Well 8	2006	360 ppb			
Vanadium	Well 3	2003	8.6 ppb	UCMR	None	
	Well 4	2002	6.7 ppb			
	Well 5	2002	9.2 ppb			
	Well 6	2002	6.4 ppb			
	Well 7	2003	5 ppb			
	Well 8	2004	21 ppb			

Definitions Terms Used in This Report:

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is technologically, and economically feasible.

Public Health Goal (PHG): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

Maximum Residual Disinfection Level (MRDL): The level of disinfectant added for water treatment that may not be exceeded at the consumer's tap.

Maximum Residual Disinfectant Level Goal (MRDLG): The Level of disinfectant added for water treatment below which there is no known or expected risk to health. MRDLG's are set by the U.S. Environmental Protection Agency.

Secondary Maximum Contaminant Level (SMCL): EPA does not enforce these contaminants. They are established only as guidelines to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color and odor. They are not considered to present a risk to human health at the SMCL.

parts per million (ppm): Equals one part of liquid per million parts of liquid.

parts per billion (ppb): Equals one part of liquid per billion parts of liquid.

ND: not detectable at testing limit.

UCMR: unregulated chemical with no MCL

NTU: Nephelometric Turbidity Units

Threshold Odor Number (TON): is the minimum odor of water sample that can just be detected after successive dilutions with odorless water.

90th Percentile Value: The reported copper and lead values represent the 90th percentile. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90 percent of the lead and copper values detected by your water system.

Action Level (AL): The concentration of a contaminant which, if exceeded, then triggers treatment and/or other requirements that a drinking-water supplier must follow.

General Information: The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or human activity.

Hard Water Information: Wheatland's water is considered very hard with an average hardness at approximately **187 ppm**. Although water hardness usually measures only the total concentrations of calcium and magnesium (the two most prevalent, divalent metal ions), iron, aluminum, and manganese may also be present. Hard water is generally **not harmful** to one's health but can cause other costly problems such as build up in pipes or plumbing equipment or buildup, mineral deposits can form an insulating barrier between the heating element and the water to be heated, unsightly film on their bathtubs or shower tiles. Hard water acts on many soaps and detergents to reduce their sudsing and cleaning capabilities the soapy residue they form can be abrasive and reduce the life of clothing. A water softening system can solve your hard water problem but initial purchase can be expensive to install. These systems can also be costly to run due to maintenance and supplies needed. Get all the info before making your decision.

Total Water Hardness Table (parts per million-ppm vs Grains/Gallon)

Soft - 0-60 ppm	=	0-3 Grains/Gallon
Semi-Hard - 61-120 ppm	=	4-7 Grains/Gallon
Hard - 121-180 ppm	=	8-10 Grains/Gallon
Very Hard - Over 180 ppm	=	Over 10 Grains/Gallon

Contaminates That May Be present In Source Water Include:

Microbial contaminants are viruses and bacteria that may come from sewage treatment plants, septic tanks, agricultural livestock operations, and wildlife.

Inorganic contaminants, Such as salts and metals, that can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

Pesticides and herbicides, that may come from variety of sources such as agriculture, urban storm water runoff, and residential uses.

Organic chemical contaminants, including synthetic and volatile organic chemicals that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, agricultural application, and septic systems.

Radioactive contaminants can be naturally-occurring or be that result of oil and gas production and mining activities.

Important Health Information: In order to ensure that tap water is safe to drink, USEPA and the SWRCB Drinking Water Division prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (1-800-426-4791). Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and more information about contaminants and potential health effects are available from the USEPA's Safe Drinking and Water Hotline at (800) 426-4791 or go online to www.epa.gov/safewater.

Lead & Copper Testing Results: Since 1986 in the U.S. the use of lead in plumbing pipes, fixtures, and solder has been restricted by law, when the federal Safe Drinking Water Act was first amended to require a rule regulating lead and copper at the drinking water consumers tap. Posing certain health risks to most people if consumed in excess, lead and copper enter drinking water mainly as a result of corrosion of plumbing material. As a result, the federal "lead and copper rule" was issued in 1991 by the EPA to limit the concentration of those two metals in public water. October 2007, the rule was revised; requiring water suppliers to reduce water corrosiveness in attempt to protect public water systems consumers from excessive exposure to lead and copper even further. If present, elevated levels of lead can cause serious health problems, especially for pregnant women, infants, and young children. It is possible that lead levels in your home may be higher than in other homes as a result of materials in your house plumbing. The City is responsible for providing high-quality drinking water, but it cannot control the variety of materials used in household plumbing pipes and fixtures. So, when your water has been sitting for several hours, minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using the water for drinking or cooking. If you are concerned about lead in your water, call at 530-633-2785, about its testing. For information on lead in drinking water, call the Safe Drinking Water Hotline (1-800-426-4791) or go to <http://www.epa.gov/safewater/lead>. Wheatland's main water distribution system piping material is almost exclusively C-900 PVC (polymerized vinyl chloride plastic) piping and is resistant to corrosion. The other piping material used is asbestos cement (AC) which is also highly resistant to corrosion.

To find out how well they are doing this, water suppliers are required to sample a representative number of consumer's household taps, with the frequency of sampling depending upon the size of the system and the system's lead and copper results. The City of Wheatland, for instance, is required to sample for lead and copper at 40 consumers taps, every three years. The City of Wheatland last lead and copper testing was required and performed in 2014 and those results are reported below. Next round of sampling will take place in 2017. The table below summarizes the most recent monitoring for these constituents. No samples collected in 2014 were found to be above the action level of 15 ppb for lead and 1300 ppb for copper.

	Year Tested	# of samples collected	# above action level	90 th Percentile Result (ppb)	Action Level (ppb)
Lead	2014	40	0	4.0	15
Copper	2014	40	0	350	1300

Nitrates: Nitrate in drinking water at levels above 45 ppm is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in serious illness: symptoms include shortness of breath and blueness of the skin. Nitrate levels above 45 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with specific enzyme deficiencies. If you are caring for an infant you should ask advice from your health care provider.

Arsenic: While your drinking water meets and is well below the federal and state standard of MCL 10ppb for arsenic, it does contain very low levels of arsenic. The arsenic standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The U.S. Environmental Protection Agency continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

Disinfectant Added to Water						
12.5 % Sodium Hypochlorite Solution (Bleach)	All 15 Sample Points	Year 2016	Avg. (ppm)	Range (ppm)	MRDL	MRDLG
			0.75	0.21 – 1.16	4.0	4.0

Bleach in Water: Why do we put bleach in the water? Bleach is an oxidizing agent used as a disinfectant that, when added to water, kills microorganisms such as bacteria and viruses. The State of California requires that we maintain a minimum free residual of 0.2 parts per million (ppm) of chlorine in our water at all times to kill any potential microorganisms. Five alternating samples are collected daily by the water operators to ensure the 0.2 ppm minimum is meant and maintained. The City's target chlorine ppm range is 0.50-0.80.

Microbiological Water Quality: The simple fact is bacteria and other microorganisms are naturally present in the environment and can be found all around us: in our food; on our skin; in our bodies; and, in the air, soil and water. Some are harmful to us and some are not. Testing for these bacteriological contaminants in the distribution system is required by State regulations. The testing is done regularly to verify that the water system is free from coliform bacteria which are bacteria that are naturally present in the environment and are used as an indicator that other; potentially-harmful, bacteria may be present. The minimum number of tests required by SWRCB Drinking Water Division per month is four (4). The City collects five (5) per month with a total of 60 samples collected annually. From those 60 samples, the highest number of samples found to contain coliform bacteria during any one month was one (1). Retest sample passed.